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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,672	06/25/2001	Stephen H. Brown	10024-2	9767

23455 7590 03/21/2003

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EXAMINER	
NGUYEN, TAM M	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 03/21/2003 6 b

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/891,672	BROWN ET AL.	
	Examiner	Art Unit	
	Tam M. Nguyen	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *6/25/01* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

The rejection of claims 21-40 under 35 USC § 102(b) and 103(a) is withdrawn by the examiner in view of the amendment filed on January 30, 2003.

A new non-final rejection follows.

Terminal Disclaimer

The terminal disclaimer filed on February 4, 2003 is improper because the application/patent being disclaimed has not been identified and the terminal disclaimer also lacks the enforceable only during the common ownership clause needed to overcome a double patenting rule.

Specification

The disclosure is objected to because in applications claiming priority under 35 U.S.C. 119(e), a statement such as "This application is a continuation of U.S. Application No. 09/017,777, filed on February 3, 1998, now patented No. 6,368,496" should appear as the first sentence of the description. Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 21-40 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,368,496. Although the conflicting claims are not identical, they are not patentably distinct from each other because each set of claims is draw to a method for treating a reformate to remove olefin by using the same acidic catalyst. The claims of the present application do not claim that the crystalline molecular sieve material is bound with a binder matrix comprising alumina. However, the catalyst of the patented claims is the same as the claimed catalyst in the present application. Therefore, it would be expected that the present claimed catalyst is bound with a binder matrix comprising alumina.

Claims 21-40 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,500,996. Although the conflicting claims are not identical, they are not patentably distinct from each other because each set of claims is draw to a method for treating a reformate to remove olefin by using the same acidic catalyst. The patent claims do not claim the amount of diene in the hyrotreated reformate. However, the reformate of the patented claims is treated to remove diene as claimed in the present claimed process. Therefore, it would be that the reformate of the patented claims would have the amount of diene as claimed in the present claimed process.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0780458

The EP reference discloses a process for reducing the olefin content of an aromatics containing hydrocarbon fraction. The process comprises contacting the hydrocarbon with acidic active catalyst to result in the substantial alkylation of aromatics with olefins. The alkylation

process is operated at a temperature of from 50- 150° C (167- 302° C) and at a pressure of from 250 to 450 psig. (See page 1, 44 through page 2, line 20; page 3, lines 14-34 and page 4, lines 29-43)

Regarding claims 21 and 22, the EP reference does not disclose that the amount of diene in the aromatic fraction is negligible or below 50 ppm. However, it appears that the aromatic fraction of the EP reference does not contain diene. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of EP by using an aromatic fraction which comprises the claimed amount of diene because diene is not a critical component in the process. Therefore, one of skill in the art would use any aromatic fraction including the claimed aromatic feedstock.

Regarding claim 23, the EP reference does not disclose that the aromatic hydrocarbon stream comprises C_{7+} reformate or light reformate. However, the reference discloses that the any feed containing aromatics and olefins can be employed in the process. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the EP process by using an aromatics reformate as a feedstock because it would be expected that a reformate would be effectively treated in the EP process because reformates contains both olefins and aromatics.

Regarding claim 24, the EP reference does not specifically disclose that aromatic fraction comprises toluene and xylene. However, the EP reference discloses that the aromatic fraction comprises C_6 to C_{12} aromatics. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the EP reference to an aromatic fraction comprising toluene and xylene because it would be expected

that the claimed reformate would be effectively treated in the EP process because toluene and xylene have carbon numbers of 7.

Claims 25-29, and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 780458 in view of Rubin et al. (4,954,325).

The process of the EP reference is as discussed above.

The EP reference does not disclose the catalyst is MCM-22 and its characteristics. However, The Rubin reference discloses that MCM-22 is an effective catalyst for alkylation processes in which aromatics are alkylated with olefins. This discloses a binder-free or self-bound molecular sieve (See col. 6, lines 30 through col. 7, line 3 and col. 8, line 30 through col. 9, line 7). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the EP reference by utilizing an MCM-22 catalyst as taught by Rubin because MCM-22 is an effective alkylation catalyst. It is noted that the catalyst of Rubin would have similar characteristics as the claimed catalyst because the Rubin catalyst is similar to the claimed catalyst.

Regarding claim 29, the EP reference does not specifically disclose that the process is operated at a space velocity of from 0.1 to 100 WHSV. However, Rubin discloses the alkylatin process which is operated at a space velocity of from 0.1 to 1000 WHSV. (See col. 6, lines 30-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of EP reference by using the space velocity as taught by Rubin because such space velocity is effective in an alkylation process.

Claims 30-34, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0780458 as applied to claim 27 above, further in view of Boitiaux et al. (5,417,844).

The EP reference does not disclose a pre-treating step. However, Boitiaux discloses a process for removing dienes from a hydrocarbon feed comprising olefins and aromatics by using a catalyst comprises nickel and alumina and the removing step is operated at a temperature between 50 and 180° C, at a pressure of from 30 to 50 bar (435 to 725 psig). (abstract; col. 3, lines 66-68). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the EP reference by using the Boitiaux feed and passing it into the treating step because the EP feed is similar to the Boitiaux feed in terms of olefins and aromatics.

Boitiaux does not specifically disclose the pre-treating step is operated at a space velocity from 0.1 to 100 WHSV. However, Boitiaux discloses that the hydrocarbon flow rate is 200 and 800 cm/h. It is estimated that the space velocity of the Boitiaux process would be within the claimed WHSV.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (703) 305-7715. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marian Knode can be reached on 703 308 4311. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-5408 for regular communications and (703) 305-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Tam Nguyen/ TN
March 18, 2003